

Clinical Department

CASE HISTORIES FROM THE CHILDREN'S DEPARTMENT UNIVERSITY OF CALIFORNIA MEDICAL SCHOOL AND HOSPITALS

1921 Series. Case No. 7, 1920. Male, American. Age, 6 months.

No. 6482. E. V.

Complaint—Diarrhea, convulsions, fussiness.

Family History—Mother and Father living and well. Four sisters living and well. No miscarriages. Family history entirely negative.

Past History—Full term baby, delivery spontaneous, following a short, easy labor. No cyanosis or injury at birth. Birth weight 6 pounds. He was breast fed for five weeks, then, because of the disappearance of the breast milk, was placed on a whole milk formula. While on breast milk the child's condition had been very good, a gradual gain in weight with no diarrhea nor vomiting. Following the change to a milk formula he developed constipation with marked flatus, which gradually progressed in severity. After remaining on this formula for two months he was changed to a sweetened condensed milk formula, but the condition became worse and he became very irritable. After an interval of two weeks he was returned to a whole milk mixture and remained on this until two weeks previous to entrance, at which time he began to have spasms at hourly intervals, these lasting two to three minutes at a time. At the end of twenty-four hours the spasms ceased, none appearing later, no diarrhea nor vomiting. Immediately all feedings were stopped and he was given albumin water for a few days, then placed on a whey mixture. Upon this latter he developed a diarrhea or five to six stools daily containing much mucus and a few curds, also vomiting. Loss of weight was not great until the last two weeks previous to entry, during this period he lost two pounds. No fever was noted. On entrance, January 21, 1920, his weight was nine and one-half pounds.

Physical Examination—Showed a poorly nourished and poorly developed infant of 6 months, very toxic. Skin was very dry and dusky in appearance, tissue turgor very poor with very little subcutaneous tissue. He lay with arms and legs flexed and spastic with a marked carpo-pedal spasm. He was very irritable when touched, reacting very readily to any stimulation. Head: some bossing of frontal and parietal bones with slight cranio-tabes, anterior fontanel opened and somewhat sunken. Eyes, ears, nose and throat negative. There was no neck rigidity. Chest showed beginning rosary of the ribs, with a slight Harrison's groove. Heart and lungs were negative. Abdomen somewhat sunken, no rigidity, no masses nor points of tenderness. Liver edge was palpable, spleen not felt. Genitalia negative. Extremities slight epiphyseal enlargement, marked carpo-pedal spasm with flexion of extremities. Reflexes: knee jerks hyperactive but equal, no Brudzinski nor Babinski, no ankle clonus. Positive Chvostek's sign.

Laboratory Examinations—Von Pirquet, Wassermann and urine negative. Blood count showed a reduction in hemoglobin, otherwise negative. Electrical reactions:

Entrance	A. O. C.	C. C. C.	C. O. C.	A. C. C.
ma. 1-	1	2	2+	

Diagnosis—Tetany, made from the cardinal symptoms, positive Chvostek's sign, carpo-pedal spasm and hyperexcitability to galvanic current. This condition, as is usually the case, was associated with rickets (cranio-tabes, enlarged epiphyses, etc.). Superimposed on this was acute intoxication due to the marked water loss from the diarrhea and vomiting.

Discussion of Treatment—Because of the gastrointestinal disturbance, which was probably due to the failure to assimilate the food taken, a feeding high in protein, low in fat and carbohydrate was commenced. On this feeding the diarrhea and vomiting ceased, so carbohydrates were gradually added and later fat until the child was placed on a rational feeding for his age, and this was very well assimilated. During a two days' observation the tetany increased so calcium lactate in five grain doses four times daily by mouth was started. After four days the symptoms seemed somewhat improved although marked spasticity was still present with carpo-pedal spasm. Electrical reactions:

C. O. C.	A. O. C.	C. C. C.	A. O. C.
1	2	2.5	4

still showed extreme hyperexcitability with both anodal and cathodal reactions reversed. Calcium lactate was stopped and calcium chloride commenced in seven and one-half grain doses six times daily. At the end of forty-eight hours marked improvement was noted, less spastic and less irritable. At the end of ten days on this drug the electrical reactions were:

C. C. C.	A. O. C.	A. C. C.	C. O. C.
3	4	7	10+

and spasticity had practically disappeared. At the end of three weeks the calcium was discontinued with no recurrence of symptoms on discharge, a month and a half later. Cod liver oil was not started until the symptoms of tetany had practically disappeared.

Conclusion—Although the blood calcium was not done on this patient undoubtedly it was markedly reduced as shown by the marked improvement upon administration of calcium by mouth. Not only the symptoms were markedly improved but also the rapid change in the electrical reactions were noted. It was also noted that improvement was more rapid upon calcium chloride than upon calcium lactate. The diet in this case had been fairly rational and no etiological cause for the condition could be found. The patient was discharged at the end of two and one-half months in the hospital in very good condition, having gained three and one-half pounds in weight and there being no remaining signs of the tetany.

Notices

THE CALIFORNIA STATE ASSOCIATION OF PHYSIOTHERAPISTS

The organization of this Association, along the lines discussed elsewhere in this number of the Journal, has been completed, and it is now functioning as a member of the Section on Technical Specialties of the Medical Society of the State of California, and of the League for the Conservation of Public Health.

The officers of the association are as follows: Hazel Furschgott, President; Florence Atkinson, Assistant Secretary-Treasurer; Margaret Stevenson, Vice-President.

Executive Committee—The above-named officers and Ethel Johnson, Harriett Bosworth, Marie Easson.

VACANCIES IN THE MEDICAL CORPS OF THE NAVY

The United States Navy is offering an attractive opportunity for young doctors to join the Medical Corps. There are many vacancies in the Medical Corps available to young graduates and to students who have not had their hospital training